

## EXTENSIVE FIGURING

No Calculation Is Too Intricate for the Bureau of Standards.

MILLIONTHS OF INCHES

How Hot Is the Heat of a Candle Six Miles Away.

Such marvelous achievements as the measuring of candle light six miles distant or the splitting of a human hair into a thousand widths are among the accomplishments of the government's bureau of standards recently established at Washington to supersede the office of standard weights and measures.

The experts of this bureau are scientists of wide experience, and they have at their command every approved means for further technical study. It is claimed that no problem within the range of their investigations is unsolved for them. They are able, for example, to tell how many thousands of an inch the works of a watch will expand when carried in the vest pocket and subjected slightly to the heat of the body; to measure the force of the feeblest breath, and to divide and sub-divide 100 times the wave length of light, each wave being about 50-100 of an inch long.

Broadly stated, the bureau's functions are as follows: To supervise the custody of all standards; to compare the standards used in scientific investigations, engineering, manufacturing, commerce and educational institutions with those adopted or recognized by the government; to construct, when necessary, new standards, their multiples and sub-divisions; to test and ascertain the calibrations of standard measuring apparatus; to solve problems which arise in connection with standards and to determine physical constants and the properties of materials.

Information concerning standards and the methods employed to secure them, will be furnished for the benefit of the United States government, any State or municipality within the United States, scenic societies, educational institutions, firms, corporations and individuals engaged in manufacturing or other pursuits.

Professor William Hallowell, of Columbia University, who is identified with the work of the bureau, has recently explained the importance of the new institution.

"Many people are at a loss to understand," he said, "how the researches and tests of this bureau can be of any practical value to the average citizen. What does he care, anyway, about standards and decimal sub-divisions? Just this much: If he buys a thermometer, or an incandescent lamp, or a set of scales, or a lens or a machine—steam, gas, electric, pneumatic or hydraulic—or any one of a thousand contrivances in common use, he wants to know whether it is what it should be, and whether it conforms with standards recognized in other parts of the world.

"To manufacturers whose products are brought into competition with those of other countries this knowledge is of the greatest importance. If American manufacturers, in offering their goods for sale in Europe, should represent them to be of a certain degree of fineness, or as fine as similar European products, and expert comparisons should show that the facts in the case had been misstated, it is easy to see what would happen.

"It has been necessary in the past for manufacturers in this country to pay individual experts fancy rates to test the quality and powers of their output, to make such tests themselves at much trouble and expense, or to ship their goods to France or Germany for inspection and measurement by foreign physicists. Now all this may be done right here, and instead of costing from \$25 to several hundred dollars, the needed information may be had almost for the asking, a fee of only \$2 or \$3 being charged by the bureau to prevent its being deluged with nonessential requests.

"How and where do these standards of weight and measurement originate? The whole international system is built up systematically from three fundamental units. These are the unit of force—the second; the unit of mass—the gram, and

## THE VIRGINIA BUILDING AT THE World's Fair, St. Louis, Displays Exclusively Pianos Manufactured by THE CABLE COMPANY.

The exclusive privilege was granted to us by the Exposition Committee.

THE FINEST LINE OF PIANOS IN AMERICA.

Mason & Hamlin  
The Conover  
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Also the celebrated Mason & Hamlin and Chicago Cottage Organs.

WE MAKE A SPECIAL OFFER THIS WEEK ON

## Cable Pianos

CALL AND INVESTIGATE. NEW SUPPLY OF GOLD MOULDED RECORDS, 25c. Each.

FIT ANY MACHINE. REMEMBER others charge you 50c. for the same article.

## THE Cable Company,

213 East Broad.

the unit of length—the centimeter. No other arbitrary units whatever are employed, all other standards being derived, directly or indirectly, from these three.

"To illustrate the delicacy of the processes employed by the commission:

"When comparing two kilogram blocks their weight was noticeably affected by their relative position on the balance scale. Side by side they weighed the same, whereas, when one was placed

on top of the other the under block was the heavier, for the reason that gravitation decreases as objects recede from the center of the earth. That process represented a delicacy in weighing of one part in 100,000, and in order to show the difference represented by moving the blocks as indicated it would be necessary to weigh to about one-tenth-thousandth of a grain.

"It is possible to measure temperature to a millionth of a degree. One of the recent determinations in measuring radiant heat takes as the unit the amount of heat thrown off by a candle six miles distant. The instrument used to record these radiations is an exceedingly delicate affair, consisting usually of a very light mica disk delicately suspended in a bulb from which most of the air has been exhausted. When the radiations from the candle fall on this disk they heat it sufficiently to force it back.

"As a rule light lends itself very nicely to extremely fine measurements. It is no trick to calculate accurately to a thousandth part of a degree of a minute substance that is almost invisible to the naked eye, this being possible through the interference of waves of light. If we have two systems of waves which come together so that the crests of one system coincide with the crests of the other, the two systems are then in step, as we say, and help each other. On the other hand, if for any reason one of them is a trifle behind, they come in out of step, and neutralize each other. If the movement of a watch were to expand twenty-five thousandths of an inch in a temperature of 15 degrees above the normal, the expansion would be equivalent to about two of the waves of light.

"Suppose you are buying or are manufacturing for sale some incandescent lamps which should be, for example, 10 candle power on a 110-volt circuit. You cannot be sure of this unless you use a standard, and receive in return an official certificate stating whether it is or is not up to the standard. The laws define the unit of electrical strength and resistance, and also the resistance of a given lamp. The strength of an electrical current is determined by ascertaining the amount of silver which a specific current will deposit in a given length of time, as in silver plating. All we have to do is weigh the silver deposited, and we have the standard of current immediately.

"From time to time I have asked the bureau to test for this laboratory different pieces of electrical apparatus, such as cells, dynamos, radio coils, relays, and transformers. Other laboratories, as well as manufacturers, have submitted electric motors, steam engines, gas engines, microscopes, telescopes, photographic lenses, etc. The bureau has recently by the assay of a given lamp and also the resistance of a given lamp, and the strength of an electrical current is determined by ascertaining the amount of silver which a specific current will deposit in a given length of time, as in silver plating. All we have to do is weigh the silver deposited, and we have the standard of current immediately.

"If you are about to purchase some copper for electrical purposes, and have shown to you a quantity of that metal and are told that it is of a certain conductivity, all you need to do is to send it to Washington and find out if it has been correctly represented. The same thing is true as to the purity of gold and silver and all other metals. In course of time the bureau undoubtedly will be able to test radium, thorium, actinium, polonium and other radio-active substances with the same degree of skill that has characterized its other experiments. In fact, in this field alone, the bureau promises to be of immense value to our citizens, since it is commonly believed that radium and like properties will soon be found in abundance in the United States."

—New York Times.

### SALEM SOCIAL.

(Special to The Times-Dispatch.)  
SALEM, Va., May 28.—The members of the Roanoke College Cotillion Club gave a very informal hop Tuesday night at Hotel Duval. Among the dancers were Miss Mary Harnan with Mr. A. H. Spiller, Miss Grandville Deward with Mr. George Reese, Miss Lucy Biggs with Mr. J. H. Hubbard, Miss Annie Langhorne Ayres with Mr. Moseley Toney, Miss Loomis Logan with Mr. Arthur Ward, Miss Nannie Logan with Mr. W. B. Tinsley, Miss Kitten Kowan with Mr. J. L. McClung, and Miss Katie Millard with Mr. James Jones.

Stags—Messrs. J. A. Greenland, Royall Cannaday, Robert Hubbard, Wyth Peyton, Little McClung, F. A. Rinker and W. A. Harman.

The Scientific Society held an unusually interesting meeting Thursday night in the Cleverton Hall. The meeting was opened by the reading of a paper by Mr. W. A. Harman on "The New Discoveries in Radiation and Their Significance," followed by a vocal solo by Miss Claudine Ferguson. Miss Alma Garrett then read a paper entitled "The Knowledge of the Moon." Mr. Carl Patterson played a very beautiful violin solo and the meeting was closed by a discussion of aerial navigation.

Colonel A. M. Bowman has been in Philadelphia for the past week on business. Miss Kitten Rowan, of Union, W. Va., is visiting her aunt, Mrs. Lewis Smende. Mr. W. A. Wade, who has been attending the Lutheran Seminary at Gettysburg for the past year, is spending the week with friends in Salem.

Mr. and Mrs. Dudley Bogher, of Clover, Halifax county, were in Salem Wednesday to attend the funeral of Mrs. Bogher's father, Mr. Benton Wiley. Dr. Margaret Painter, of Detroit, Mich., arrived Saturday to attend the wedding of her sister, Miss Elizabeth Painter.

Mr. W. H. A. Hansen, of Wilmington, N. C., is spending the week in Salem.

### SCOTTSVILLE AFFAIRS.

(Special to The Times-Dispatch.)  
SCOTTSVILLE, May 28.—The Thursday Night Club went up like a sky rocket at its last meeting on the evening of May 19th. The usual literary programme was dispensed with and the members gave themselves to social enjoyment. Softly shaded lamps lent a gentle glow to the handsome parlors at the home of Mr. and Mrs. J. V. Pereira, while guitar, banjo and zither made sweet melody.

"And the music shall be filled with music And the cares that infest the day, Shall fold their tents like the Arabs, And as silently steal away."

In the dining room a beautiful and tempting collation was served. After this the entire assembly joined in singing "The Sweet Old Word, Good-Bye," before disbanding for the summer. And when the last good night was said it was with glad hearts for lessons learned during the winter evening. Those present at the meeting were: Mr. and Mrs. A. G. Bell, Dr. and Mrs. J. P. Blair, Mr. and Mrs. J. V. Pereira, Misses Marietta and Lucie Powers, Miss Rose Farrar, Dr. James Harts, Mr. H. G. Harris, Mr. J. Tyler Beah, who has been ill with typhoid fever, is improving.

Miss Eliza Kent, sister of Mr. Brainerd Kent, of Antioch, died at the home of her brother on Monday.

Thirty excursionists left here on Monday for Richmond.

Dr. J. S. Pendleton, who has been ill, is better.

Mr. and Mrs. Walter Critzer and Mr. and Mrs. Willie Stargill, of Schuyler, visited Scottsville Monday on a fishing excursion.

Mr. and Mrs. D. H. Pitts are still absent from "Valmont."

Dr. W. C. Williams is spending a few days in Lunenburg county.

Dr. J. P. Blair will visit Buckingham Thursday.

## A PROGRESSIVE MAY CLEARANCE SALE WITH PRICES STILL FALLING!

The distinguished characteristic of this great clearance sale is that all grades of merchandise have been radically underpriced. Irresistible prices and rare values have crowded our house daily, but to-morrow unfolds fresh offerings with still lower prices that will undersell the town.

### THIS SALE OF WASH GOODS

Is the result of another great purchase, but are much lower in price. Unfavorable weather conditions is the cause of it.

New line of 15c. Flannel Sullings, 12 1/2c  
Special purchases of 15c. Tweed Sullings, 15c  
The New 17c. Flannel Voles for, 11 3/4c  
A new 17c. Flannel Organdy for, 10c  
12 1-2c. Plaid, white, with black figures, 8 3/4c  
25c. Mercerized Batistes for, 5 3/4c  
15c. Mercerized Gingham for, 8 3/4c  
12 1-2c. Solid Color Organdies for, 8 3/4c  
A Sheer Batiste, dots and figures, 4 7/8c

### MONDAY'S UNDER-PRICED SUMMER WHITE GOODS.

Read the price list that follows. It is only the budding of the real value of this untold story. You have to see them.

A Striped Madras, a bargain, 6 3/4c  
Another lot of Bourrette India, 5 1/2c  
A Sheer Persian Lawn at, 12 1/2c  
25c. Organdy, two yards wide, for, 14 3/4c  
25c. Batiste, forty inches wide, for, 16 3/4c  
22-inch Madras, 15c, value, for, 11 3/4c  
45c. Wash Chiffon, forty-eight inches wide, 25c  
60c. French Organdy, to be sold Monday, 49c  
60c. Wash Chiffon, forty-eight inches wide, 33c

### OUR CLEARANCE SALE IN MAY

Just at the time they are needed, puts prices on Waists, Skirts and Shirt Waists that are absolutely unknown—great specials.

60c. Percale and Madras Waists, 25c  
A Lawn Waist bargain, 48c  
\$1.25 Lawn Waist, for, 98c  
A \$3 Silk Waist, for, \$2.25  
Duck Skirts, white and black, 98c  
A \$2 Plaque Skirt, for, \$1.48  
A \$2.50 Linen Skirt, for, \$1.98

### THIS UNPRECEDENTED SILK SALE AT CLEARANCE PRICES

will make many ask one another where did they get them.

50c. Cream Habutai Silk, twenty inches wide; clearance, 19c  
50c. Cream Habutai Silk, twenty-seven inches wide; clearance, 48c  
1.00 Guaranteed Black Taffeta Silk, twenty-seven inches wide; clearance, 73c  
1.25 Guaranteed Black Taffeta, thirty-six inches wide; clearance, 98c  
We will sell Danish Cloth, one dress pattern to a customer, 103 1/2c  
Another special for Monday only—one skirt pattern to a customer—our regular \$1.00 Melton for, 75c

### REMARKABLE VALUES

In all kinds of Laces at May clearance prices, that will go at a slight discount. Point de Paris Laces, the regular 12 1-2c. kind, for, 5 7/8c  
25c. and 30c. Laces will be sold for, 11 3/4c  
A new line of Net Top Laces, 12 1/2c  
25c. Embroidery, wide, sheer work, for, 12 1/2c

### WALKING SKIRTS; TWO SPECIALS.

A \$5.00 Mohair Walking Skirt, nicely made and trimmed, for, \$3.98  
A new \$8.00 Walking Skirt, a new mixture, that will be sold one to a customer, at, \$4.98

### MONDAY SPECIAL. FINE LONG CLOTH.

15c. value for 10 1-2c. Only one piece to a customer.

### MONDAY SPECIAL. JAP FANS.

19c. value for 10c. Small and large.

### CLEARANCE SALE

of Linens is always an interesting theme to housekeepers when they can get them at these prices.  
Huck Towels, hemmed, extra heavy, 10c  
Terry Cloth, bleached, 12 1/2c  
Absorbent Crash, bleached, 5c

### CLEARANCE SALE. Continued.

25c. Damask, bleached and red, 19c  
50c. German Damask, heavy, for, 45c  
Fine Quality Doylies, a bargain, 39c

Shirt Waist Linen, thirty-six inches wide—a hot weather bargain, 25c.

**E. T. FAULKNER COMPANY,**  
THE DAYLIGHT CASH STORE,  
Broad and First Streets.  
WE ARE AGENTS FOR STANDARD PATTERNS.

Men's Shirts, a great bargain; 50c. value, for, 39c.

## WONDERFUL CROWS IN FAUQUIER COUNTY

(Special to The Times-Dispatch.)  
MORRISVILLE, Va., May 28.—In the forests that begin a short distance south and east of Morrisville and extend in almost unbroken masses for many miles, and whose innermost recesses have seldom or never been explored by man, there abounds the greatest quantity of the most varied wild game to be found east of the Alleghenies.

The farmers of this section realizing that they possessed but slight cognizance of the various denizens of this woody region, were not greatly startled when just as dawn began to peep through the mellow haze there came from the forest vast depths what appeared to be crows having with the young plants as they were distinctly seen pulling two stalks at one time—one with each bill. The ordinary surface of the ground was not disturbed, for the crows were dropping everything else and arose as one man to exterminate them.

The first specimens that the guns procured showed a bird slightly larger than the ordinary crow and exactly like it in every detail save the legs, feet, eyes and tongues which bore a strong resemblance to the same parts of a parrot and in having two well developed bills each an apparent cross between the bill of a crow and a parrot, quite rounded and uttering no sound at first; in about ten days

they showed their ability to make a louder, longer and more pleasing noise, than the ordinary crow or any other bird ever seen in this section.

It was not the harsh croaking note of the crow, but distinctly articulated sounds, with the closing sounds repeated over and over again with a rather musical effect that could be distinctly heard for a great distance.

As each bill began at the same time with distinct and different sounds the separate notes are very difficult to catch; but they eventually blend together in a manner that produces an electrical effect upon the people of Fauquier.

As near as it is possible to reproduce them the following gives the separate articulated sounds of the two bills and shows how they unite to form one clear and remarkable sentence that can be heard for a long distance:

"Pull up this corn we all will—we all will!"  
"Our lives the farmers want hard!—want hard!"  
We all will! we all will!—we all want Willard!

This bird is so completely voiced the sentiments of the people that they are completely carried away with it, and so far are they now from seeking to exterminate it that they would look upon its extermination as an irreparable calamity.

The same men who shed many bitter tears upon the first appearance of this singular bird would a hundred fold shed as many upon its disappearance. It is his long held a dwarfed state of corn on which there was a grainless shoot unworthy of the huskers notice, and the crow was dolefully croaking:

"Ever since I was born, We have lived off Neely's corn; But this year Moses an Brewster and Dick, Have played us one horrible trick."



## 30-Day Reduction Sale To Reduce Our Overflowing Stock of Vehicles of all Kinds.

We offer an immense line for the next thirty days at greatly reduced prices; also bargains in second hand surreys, phaetons and runabouts.

**SMITH & MURPHY,**  
314 NORTH FIFTH STREET.

respect and reverence is this odd bird now held that it might be termed the sacred bird of the farmer.

The large numbers in which these birds first appeared in this section seems to justify the claims of those who assert that they will spread all over the State before another summer is out.

The parrot like powers possessed by this new species of the feathered kingdom while it might have surprised the inhabitants of many regions, was not altogether unfamiliar to the people with the crows in this section, and it was the words much more than the gift of uttering them that held the people spellbound.

For several years past the neighbors of Mr. Cornelius Dimpledorp have intimated that the crows lived from early fall until late spring of this ungarnered corn, a disgrace to all approved systems of agriculture.

Mr. Dimpledorp, with his two sons, Moses and Brewster, and his hired man, Richard Braxton, husked and cribbed his corn and mowed his fodder in a good time.

Mr. Penberthman Manuel riding along the road a few days after Mr. Dimpledorp had husked his corn and fodder, heard a crow on the edge of the cornfield making his most tremendous cawing. He stopped his horse to look and listen.

In his look he held a dwarfed stalk of corn on which there was a grainless shoot unworthy of the huskers notice, and the crow was dolefully croaking:

"Ever since I was born, We have lived off Neely's corn; But this year Moses an Brewster and Dick, Have played us one horrible trick."

LEESBURG, VA.

(Special to The Times-Dispatch.)

LEESBURG, Va., May 28.—Mrs. Pardee Moses, of New York, and Miss Malcolm, of London, England, are the guests of Mrs. H. H. Russell.

Mr. E. B. White has sold to Mr. J. T. Keesee, of Tazewell county, his splendid Braden farm, near here, containing 300 acres.

Mr. J. S. Dovel, of Bridgewater, Va., has contracted for the erection of Steven A. Kears residence at Blumens. Mr. Kears was formerly from Staunton.

Mr. Harry Alexander, of Leesburg, has been elected captain of the Washington and Lee University baseball team for the season of 1904.

Captain John H. Alexander delivered the address at Confederate memorial services in Alexandria on Tuesday.

Mr. R. R. Walker, of Waterford, has sold to Mr. Daniel H. Leedom, of New York, his farm near Paconian Springs, containing 135 acres.

Memorial services will be held here on June 24.

Colonel John S. Mosby will visit Leesburg during the Horse and Cattle Show.

Cards are out announcing the marriage of Miss Frederica Fitzhugh, daughter of Mr. and Mrs. William L. Hensler, of Haymarket, Va., to Mr. Gaquet of Zerega, of Aldie. The ceremony will be performed at Haymarket June 15th.

Colonel E. V. White, of Confederate fame, is rapidly recovering from his long illness.

Major J. H. Macrae, of Upperville, died at his home on Tuesday, aged 80. He was a graduate of West Point and had been mayor of Upperville for many years. A widow and several children survive.

The school book committee selected the

following school books for Loudoun Wheeler's Primer, Merrill's Speller, Graded Classics, Hyde's English, Wheeler's Graded Studies in English, Smith's Virginia History, Lee's Primary History, Bruce's School History, Beuhler's Grammar, New Natural Geographies, Colwell's Arithmetic.

**Sydner & Hurdley**  
"Automatic Refrigerators."

**They Have**

inside hot-air shaft you can't get at to clean.

NO top to lift, letting hot air pour in on the ice.

NO zinc ice box to lift out and clean; more trouble to put back than take out.

NO top to lift and fall back against plaster or wall paper.

NO long drain pipe, with cap underneath box, you can't see if it's on or off.

NO drinking water FULL OF AMMONIA; it has an isolated water cooler.

When once the merits of the "Automatic" are explained, "any old salesman" can sell it. It is a Refrigerator that refrigerates.

**"Pure and Simple."**  
Drop in when passing, look through our new Carpets, Rug and Drapery department; Mattings, Shades, Lace Curtains, etc., in charge of Mr. J. H. Tracy, formerly with Sloane, of New York. Have you a Baby? We have 200 patterns of Cribbs on our floor.

**Lawn and Porch Goods in Great Variety.**

**SYDNER & HUNDLEY.**

## BOILS PYRAMIDS OF PAIN

Boils show the blood is in a riotous, feverish condition, or that it has grown too weak and sluggish to throw off the bodily impurities, which then concentrate at some spot, and a carbuncle or boil is the result. To one already enfeebled by disease, boils seem to come with more frequency, causing the intensest pain and greatest danger to the already weak and debilitated sufferer. All skin eruptions, from the sometimes fatal carbuncle to the spiteful little cat-boil, are caused by bad blood, and the only way to avoid or get permanently rid of them is to purify and build up the deteriorated, polluted blood, and counteract the humors and poisons; and nothing will do this so quickly and thoroughly as S. S. S., which is the acknowledged king of blood purifiers and greatest of all tonics. Where the blood has become impoverished and is poor and thin, no medicine acts so promptly in building up and restoring its richness, purity and strength. The time to cure a boil is before it develops, when it is in a state of incubation or formation in the blood; for boils are, after all, only the impurities and poisons bubbling up through the skin, and this will continue in spite of poulticing and lancing till the blood gets rid of its accumulated poison. The way to stop boils is to attack them in the blood, and this is what S. S. S. does. All danger of boils is past when the blood has been thoroughly purified and the system cleansed of all morbid, impure matter. If you are subject to boils, then the same causes that produced them last season will do so this, and the sooner you begin to put your blood and system in good order the better the chance of going through the spring and summer season without boils or other painful and irritating skin eruptions. S. S. S. is guaranteed purely vegetable, and can be taken with perfect safety by old and young, and without harm to the most delicate constitution. It is mild and pleasant in its action, and unequalled as a cure for boils and kindred eruptions. Write us if you would like medical advice or other information.

Allegheny, Pa., June 11, 1903.  
From the age of twenty or thirty I was sorely afflicted with large, awful boils on my face and body. As soon as they would heal up in one place they would break out in another part of the body, and this continued for ten years. I tried everything I could hear of to get relief, but nothing did me any good. I had but little faith in S. S. S. doing me good when I began it, but after taking it for a short while the boils began to disappear. I continued on with the medicine, taking six bottles, and all the boils entirely disappeared. Five years have elapsed since that time, and I have never been bothered since, showing that the cure was permanent. I had some thirty or forty of the most painful boils one ever had, and to be entirely rid of them by your great purifier, S. S. S., puts me under a debt of gratitude to you.  
HENRY ZINN.

All danger of boils is past when the blood has been thoroughly purified and the system cleansed of all morbid, impure matter. If you are subject to boils, then the same causes that produced them last season will do so this, and the sooner you begin to put your blood and system in good order the better the chance of going through the spring and summer season without boils or other painful and irritating skin eruptions. S. S. S. is guaranteed purely vegetable, and can be taken with perfect safety by old and young, and without harm to the most delicate constitution. It is mild and pleasant in its action, and unequalled as a cure for boils and kindred eruptions. Write us if you would like medical advice or other information.

**SSS**

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**THE SWIFT SPECIFIC CO., ATLANTA, GA.**